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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/537,633	06/03/2005	Christopher Temple	SC12418EM	4941

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EXAMINER

CHRISS, ANDREW W

ART UNIT	PAPER NUMBER
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2416

NOTIFICATION DATE	DELIVERY MODE
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09/02/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 10/537,633	Applicant(s) TEMPLE ET AL.	
	Examiner Andrew Chriss	Art Unit 2416	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 June 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 June 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/24/2009</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 24, 2009 has been entered.

Response to Amendment

2. Applicant's amendment, filed June 24, 2009, has been entered and carefully considered. Claims 1-20 are amended and currently pending.
3. In light of Applicant's amendment to Claims 1-3, rejection of Claims 1-20 under 35 U.S.C. 103(a) is withdrawn.

Claim Objections

4. **Claims 1-3 and 14-20** are objected to because of the following informalities: A. Appropriate correction is required.

Regarding Claim 1, claim language "when is use" should read "when in use."

Regarding Claims 1-3, "incrementation" is not a word and should be revised.

Regarding Claim 3, claim language "the a" should be revised to "the".

Regarding Claims 14-20, Applicant is reminded to use proper claim status identifiers.

Claims 14-20 should be identified as "Currently Amended".

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. **Claims 1-20** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

Regarding Claims 1, 2, and 4-12, Claims 1, 2, 8, 10, 12 recite the newly added claim limitation “when in use,” implying a mode of operation for the claimed communication nodes, a receiver, and a transmitter. However, Applicant’s specification does not provide explicit or inherent support for this mode of operation, and therefore constitutes new matter. Claims 4-7, 9, and 11 are rejected due to their dependence on the rejected claims above.

Regarding Claims 1-20, the newly added claim limitations “time unit” and “sub-time unit” in independent Claims 1-3 is not defined in Applicant's specification, as originally filed, and therefore constitutes new matter. For purposes of examination, Examiner assumes that “time units” and “sub-time units” refer to timeslots and sub-time slots, respectively. Claims 4-20 are rejected due to their dependence on the independent claims.

7. **Claim 2** is rejected under 35 U.S.C. 112, first paragraph, for comprising undue breadth. The claim language recites "a communication node" arranged to perform certain functions, wherein the sole claimed structural feature of the node is a “counter.” Therefore, the

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communication node comprises a single means. Per MPEP 2164.08(a): “A single means claim, i.e., where a means recitation does not appear in combination with another recited element of means, is subject to an undue breadth rejection under 35 U.S.C. 112, first paragraph. *In re Hyatt*, 708 F.2d 712, 714-715, 218 USPQ 195, 197 (Fed. Cir. 1983) (A single means claim which covered every conceivable means for achieving the stated purpose was held nonenabling for the scope of the claim because the specification disclosed at most only those means known to the inventor.). When claims depend on a recited property, a fact situation comparable to Hyatt is possible, where the claim covers every conceivable structure (means) for achieving the stated property (result) while the specification discloses at most only those known to the inventor.”

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. **Claims 1-10 and 12-19** are rejected under 35 U.S.C. 102(b) as being anticipated by Belschner et al (FlexRay Requirements Specification, already on record and provided by Applicant with the IDS filed June 3, 2005), hereinafter Belschner.

Regarding Claim 1, Belschner discloses a plurality of communication nodes, each node being arranged to communicate frames of data with other nodes of the plurality of communication nodes (Section 2.2, wherein multiple nodes communicate with one another) during a dynamic section associated with communication of dynamic communication slots

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(Figure 4, wherein nodes communicate during slots in a dynamic segment of a communication cycle), and each dynamic communication slot having a communication slot number (Figure 4, wherein each of the slots in the dynamic segment are associated with a number); wherein each of the plurality of communication nodes is arranged to communicate, when in use, in accordance with a time base comprising consecutively elapsing time units associated with the dynamic communication slots (Figure 4), each consecutive time unit of the base comprising at least two elapsing sub-time units and a transmission action point located at a boundary between two of the at least two sub-time units (section 3.2, page 16, wherein the current communication cycle is determined by a cycle number; and Section 3.3.1, page 18, wherein each FlexRay frame comprises a CRC code at the end of the frame), wherein each of the plurality of communication nodes is arranged to start and end, when in use, transmission of each frame of data at the transmission action point associated with the time base (Figure 7, wherein the CRC code denotes the end of one frame and therefore the beginning of a separate frame); and a counter arranged to determine a communication slot number operable to increment the communication slot number if no communication is ongoing at the end of a dynamic communication slot and to suspend incrementation of the communication slot number if communication is ongoing at the end of the dynamic communication slot (Section 2.4, Section 3.2.2, and Figure 4, wherein the dynamic segment offers collision-free access to the communication medium and frame length in the dynamic segment is variable). **Claims 2 and 3** comprise substantially the same limitations as Claim 1, claimed as a communication node and a method, respectively.

Regarding Claim 4, Belschner discloses the time base associated with static communication slots (Figure 4 and Section 3.2.1, wherein the static segment comprises static time slots).

Regarding Claims 5 and 14, Belschner discloses a predetermined number of timeslots utilized in respect of each static communication slot (Section 3.2.1, wherein a number of slots is set between a minimum and a maximum).

Regarding Claim 6 and 15, Belschner discloses a dynamically allocated number of timeslots utilized in respect of each dynamic communication slot (Section 3.2.2, wherein the dynamic segment of the communication cycle consists of zero or more slots).

Regarding Claim 7 and 16, Belschner discloses each dynamic communication slot in which frame transmission takes place is divided into alternating matching and mismatching time slots, the matching time slots being valid transmission slots (Section 3.2.2, wherein a media access strategy in the dynamic segment is based on wait times and priority of identifiers and controllers transmitting frames with higher priority identifiers send before controllers transmitting lower priority frames; and Section 3.8.3.1, wherein a start-of-frame (SOF) window is placed around the expected receive time of an SOF).

Regarding Claim 8 and 17, Belschner discloses each node comprising a receiver to set, when in use, a current communication slot number in response to whether a communication start is detected in a matching or mismatching time slot (Section 3.8.3.3, wherein a receiver applies a calculated clock correction term to the local clock).

Regarding Claim 9 and 18, Belschner discloses each node having an associated communication slot number and is operable not to transmit in dynamic communication slots

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having communication slot numbers different than the associated communication slot number (Section 3.2.2, wherein a media access strategy in the dynamic segment is based on wait times and priority of identifiers and controllers transmitting frames with higher priority identifiers send before controllers transmitting lower priority frames).

Regarding Claim 10 and 19, Belschner discloses each node comprising a transmitter to extend, when in use, a transmission to a transmission action point (Figure 7, wherein the CRC code denotes the end of one frame and therefore the beginning of a separate frame).

Regarding Claim 12, Belschner discloses each node comprising a receiver to adjust, when in use, the time base in response to a frame identity of a frame being communicated in a dynamic communication slot (Section 3.8.3.3, wherein a receiver applies a calculated clock correction term to the local clock).

Regarding Claim 13, Belschner discloses the time base associated with static communication slots (Figure 4 and Section 3.2.1, wherein a communication cycle comprises a static segment subdivided into a sequence of time slots).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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11. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

12. **Claims 11 and 20** are rejected under 35 U.S.C. 103(a) as being unpatentable over Belschner in view of Gee et al (United States Patent 5,537,549), hereinafter Gee. Belschner discloses all of the limitations of Claims 10 and 19, as described above. However, the Belschner does not disclose the transmission of a busy signal. In the same field of endeavor, Gee discloses a TDMA system wherein a TX BUSY signal is transmitted as a transmit indicator (column 13, lines 26-28). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the busy signal transmission disclosed in Gee with the FlexRay system disclosed in Belschner in order to provide clock synchronization among separate stations connected to a network.

Response to Arguments

13. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new grounds of rejection.

Conclusion

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14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Honkasalo et al (United States Patent US 6,091,717) discloses time slots of unequal duration based on the amount of packet data transmitted by a mobile station.
- b. Haartsen (United States Patent Application Publication US 2002/0126692 A1) discloses utilizing both a pseudo-token and a time-slot for medium access.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Chriss whose telephone number is (571)272-1774. The examiner can normally be reached on Monday - Friday, 7:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost can be reached on 571-272-7872. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Andrew Chriss
Examiner
Art Unit 2416
8/27/2009

/A. C./
Examiner, Art Unit 2416

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